

## **REMARKS**

Claims 1-37 were presented for examination.

Claims 28-31, 33, 34 and 36 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,842,516 to Jones. In response, Jones ('516) does not show a direct filling of the well annulus with gravel slurry pumping through the tube annulus and through the exit nozzle chambers and exit nozzles. Jones requires a filling of the top portion of well annulus totally with gravel slurry before there would be a diversion through the exit nozzles to the lower or bridge part of the well annulus. Further, Jones does not show any exit nozzle chambers but only exit nozzles. Thus, Jones fails to anticipate applicant's claim to pump straight down to the shunt tubes and out the nozzle chambers and the nozzles to fill the annulus. Therefore, Jones does not anticipate or otherwise show applicant's invention. As per Figure 2 and Figure 1 of Jones '516, the shunt tubes 25 with outlets 26 are on the exterior of well screen 21. Applicant's shunt tubes are in the interior of the screen and are connected to exit nozzle chambers that have the exit nozzles circumferentially around the pipe. The exit nozzles of Jones ('516) are shown in column 3, line 46 wherein Jones specifically identifies element 26 as outlets. However, element 29 is an insert, Jones column 3, line 20, but an insert is not a nozzle chamber. It is a nozzle insert which is an interior piece inserted for the purpose of preventing erosion. A nozzle chamber, such as in applicant's invention, is, for example, a nozzle chamber 6. Figures 1, 1A, 2, 2A, 4 and 4A show a fitted chamber around the base pipe with multiple nozzles spaced circumferentially around the nozzle chamber 6. Thus nozzle chambers are totally different in function from the mechanisms of Jones '516. In addition, claims 29-31, 33, 34 and 36 are dependent on claim 28 which should now be in allowable form. Therefore, Claims 28-31, 33, 34 and 36 should be in allowable form.

Claims 1-10, 18-21, 23 and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jones ('915) in view of Jones ('516). Presuming in Jones '915 that element 55 really points to the dashed area which would be a manifold, as the Office admits, rather than as appears in Jones '915, Jones '516 still needs to show the nozzle chamber. As discussed above with respect to the Jones '516 patent, this is not shown. Thus, the elements of Claims 1 and 18 are neither anticipated or rendered obvious over applicant's invention for the two Jones references. There is no nozzle chamber capability in Jones '915 because Jones '915 drills holes after packing. Thus, the two references are not combinable even if Jones '516 showed what the Office maintained. Therefore, Claims 1 and 18 should be in allowable form. Claims 2-10 depend on Claim 1 and should therefore be in allowable form. Claims 19-21, 23 and 24 are dependent on Claim 18 and therefore should be in allowable form.

Claims 13-15, 17, 22, 25 and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,515,915 to Jones *et al.* in view of U.S. Patent No. 5,842,516 to Jones and US Publication No. 2004/0140089 to Gunnerood. In response, the Office in citing Jones '516 in this case still is depending upon Jones '516 to show something it does not. As discussed above, Jones does not disclose the exit nozzle chamber. Therefore, Claims 13-15, 17, 22, 25 and 26 should be in allowable form.

Claims 32 and 35 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,842,516 to Jones in view of U.S. Publication No. 2004/0140089 to Gunnerood. In response, Claims 32 and 35 depend on Claim 28 which should now be in allowable form as discussed above. Therefore, Claims 32 and 35 should be in allowable form.

Claims 28 and 37 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,842,516 to Jones in view of U.S. Patent No. 5,515,915 to Jones. In response, Jones '516 still has the deficiency of not showing the exit nozzle chamber as discussed above. Therefore, its combinability with Jones '915 would still not yield applicant's invention. Therefore, Claims 28 and 37 should be in allowable form.

Claims 11, 12, 16 and 27 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With regard to the objected claims, Applicant has not yet put those in independent form yielding two more independent claims, feeling that applicant's arguments with regard to the same are such as to allow the claims upon which they depend. Therefore, Claims 11, 12, 16 and 27 should be in allowable form.

In commenting on the references and in order to facilitate a better understanding of the differences that are expressed in the claims, certain details of distinction between same and the present invention have been mentioned, even though such differences do not appear in all of the claims. It is not intended by mentioning any such unclaimed distinctions to create any implied limitations in the claims. Not all of the distinctions between the prior art and applicant's present invention have been made by applicant. For the foregoing reasons, applicant reserves the right to submit additional evidence showing the distinction between applicant's invention to be unobvious in view of the prior art.

The foregoing remarks are intended to assist the Office in examining the application and in the course of explanation may employ shortened or more specific or variant descriptions of some of the claim language. Such descriptions are not intended to limit the scope of the claims; the actual claim language should be considered in each case. Furthermore, the remarks are not to be considered

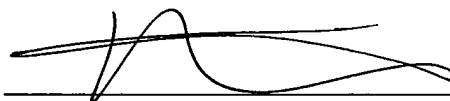
to be exhaustive of the facets of the invention which are rendered patentable, being only examples of certain advantageous features and differences which applicant's attorney chooses to mention at this time.

The Commissioner is to charge any deficiencies or overpayment to Deposit Account No. 50-2413 of Adams and Reese, LLP.

Please send all future correspondence regarding the above-referenced application to the undersigned at the address appearing below.

Reconsideration of the application as amended and allowance thereof are requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David M. Ostfeld', is written over a horizontal line.

David M. Ostfeld, Reg. No. 27,827  
Attorney for Applicant  
Adams and Reese LLP  
4400 One Houston Center  
1221 McKinney  
Houston, Texas 77010  
Tel: (713) 308-0128  
Fax: (713) 652-5152

335847.01

Fig. 6 is a side view of the entire screen assembly in place in the wellbore and indicating the fluid flow while in the gravel packing position;

Fig. 7 is a side view of the entire screen assembly in place in the wellbore and indicating the fluid flow while in the gravel packing position with a sand bridge formed in the annulus; and

Fig. 8 is a side view of the entire screen assembly in place in the wellbore and indicating the fluid flow while in the reverse position.

### **Description of Preferred Embodiments**

In general, the present invention provides a method for gravel packing around a downhole well screen in an oil gas or water well for what is known in the industry as a gravel pack completion. This method is a use of existing equipment that is used in gravel packing oil, gas and water wells. The existing equipment, however is used to circulate or squeeze a fluid containing sand or gravel into the annulus between the well screen and the open or cased hole, pumping a solids laden fluid directly into the annulus. In the present invention a gravel/frac pack operation in the annulus formed by the wellscreen and the wellbore is performed by pumping the solids laden fluid directly in to the flow tubes positioned in the annulus formed by the base pipe and the wrap wire whether or not a bridge is formed in the annulus.

Referring more particularly to the drawings, Fig. 1 and 1A, they illustrate the wellscreen 17 of the present invention in an operable position within the lower portion of a producing and/or injection well 20. Well 20 has a wellbore 25 that extends from the surface (not shown) through an unconsolidated and/or fractured production and/or injection formation 22. Even though well 20 is shown as a vertical, open hole well, it should be noted that the method presented herein is equally applicable for use in cased hole wells and/or completions as well as horizontal and/or deviated (inclined) wellbores as dictated by the situation.

As shown, wellbore 25 is cased with casing 24 and cement 23 with perforations 21 to the top of formation 22 that is to be completed with a well screen 17. Screen 17, crossover tool 31 and packer 30 are run inside of casing 24 in the unset position, and are connected to the surface